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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NM-288-AD; Amendment 39-13538; AD 2004-06-12]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-400F Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747-400F series airplanes, that requires repetitive detailed and general visual inspections of the external fuselage skin for cracks; various inspections of the affected area where cracks are found to determine the extent of the damage; and repair of cracks. This action is necessary to detect and correct fatigue cracks in the fuselage skin and frame shear tie assemblies, which could propagate and result in possible in-flight decompression of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective April 30, 2004.

The incorporation by reference of a certain publication listed in the regulations is approved by the Director of the Federal Register as of April 30, 2004.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Candice Gerretsen, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6428; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain

Boeing Model 747-400F series airplanes was published in the Federal Register on November 26, 2003 (68 FR 66384). That action proposed to require repetitive detailed and general visual inspections of the external fuselage skin for cracks; various inspections of the affected area where cracks are found to determine the extent of the damage; and repair of cracks.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Conclusion

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Cost Impact

There are approximately 72 airplanes of the affected design in the worldwide fleet. The FAA estimates that 12 airplanes of U.S. registry will be affected by this AD, that it will take approximately 1 work hour per airplane to accomplish the required inspections, and that the average labor rate is \$65 per work hour. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be \$780, or \$65 per airplane, per inspection cycle.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions. Manufacturer warranty remedies may be available for labor costs associated with this AD. As a result, the costs attributable to the AD may be less than stated above.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-06-12 Boeing: Amendment 39-13538. Docket 2002-NM-288-AD.

Applicability: Model 747-400F series airplanes, having line numbers 968 through 1286 inclusive, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct fatigue cracks in the fuselage skin and frame shear tie assemblies, which could propagate and result in possible in-flight decompression of the airplane, accomplish the following:

Service Bulletin Reference

(a) The term "service bulletin," as used in this AD, means the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2480, dated March 28, 2002.

Compliance Time

(b) At the later compliance time specified in paragraphs (b)(1) and (b)(2) of this AD, do the inspections specified in paragraph (c) of this AD.

(1) Within 6,000 flight cycles after the date of issuance of the original Airworthiness Certificate or date of issuance of the Export Certificate of Airworthiness, whichever comes first.

(2) Within 3,000 flight cycles after the effective date of this AD.

Repetitive Inspections

(c) Perform both inspections of the external fuselage skin as shown in Table 1 of this AD, per the service bulletin. Repeat the inspections thereafter at intervals not to exceed 3,000 flight cycles.

TABLE 1.—INSPECTION REQUIREMENTS

Type of inspection	Area to inspect
(1) Detailed	Inspect the skin surface for cracks initiating from the shear tie fasteners (14 locations on each side) common to the body station 800 frame between stringers S-13 and S-15 on both the left and right sides of the airplane.
(2) General visual	Inspect the skin surface at all fastener locations for cracks between body stations 780 to 800 and stringers S-13 through S-15 on both the left and right sides of the airplane.

Note 1: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Note 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Crack Findings: Inspections and Repair

(d) If any crack is found during any inspection required by paragraph (c) of this AD, before further flight, do the actions specified in paragraphs (d)(1) and (d)(2) of this AD.

(1) Perform inspections of the affected area to determine the extent of the crack using the following applicable inspection methods, per the service bulletin: detailed inspection; open-hole high frequency eddy current (HFEC) inspection; surface HFEC inspection; and dye penetrant inspection.

(2) Repair any crack per the service bulletin. Where the service bulletin specifies contacting Boeing for an alternate repair method: Before further flight, repair per a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, or per data meeting the type certification basis of the airplane approved by a Boeing Company DER who has been authorized by the Manager, Seattle ACO, to make such findings.

Terminating Action for Repaired Area

(e) Accomplishment of the repair per paragraph (d)(2) of this AD ends the repetitive inspection requirements of paragraph (c) of this AD for that repaired area only.

Alternative Methods of Compliance

(f) In accordance with 14 CFR 39.19, the Manager, Seattle ACO, FAA, is authorized to approve alternative methods of compliance (AMOCs) for this AD.

Incorporation by Reference

(g) Unless otherwise specified in this AD, the actions shall be done in accordance with Boeing Special Attention Service Bulletin 747-53-2480, dated March 28, 2002. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on April 30, 2004.

Issued in Renton, Washington, on March 16, 2004.

Kevin M. Mullin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04-6579 Filed 3-25-04; 8:45 am]

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